37 CFR 41.37(c)(1)(i) REAL PARTY IN INTEREST

The real party in interest is the assignee of the subject application:

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37 CFR 41.37(c)(1)(ii) RELATED APPEALS AND INTERFERENCES

None.

37 CFR 41.37(c)(1)(iii) STATUS OF CLAIMS

Claim 1 (Rejected)

Claims 2-6 (Withdrawn)

Claims 7-11 (Rejected)

Claim 12 (Withdrawn)

Claims 13-26 (Cancelled)

Claims 27-35 (Rejected)

37 CFR 41.37(c)(1)(iv) STATUS OF AMENDMENTS

No Amendment was filed after the February 21, 2006 final Office Action.

37 CFR 41.37(c)(1)(v) SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention is intended to overcome a problem in injection molding machines where the very heavy weight of each tie bar 20c causes excessive wear on the leading edge 42 and the trailing edge 44 of shoe assembly wear pads 32, as these wear pads move linearly back-and-forth under the tie bar. This leads to excessive wear and frequent replacement of the wear pads, with corresponding machine down-time and maintenance costs. With reference to Figs. 5 and 6, the below specification paragraphs provide an excellent description of this problem. See also Fig. 15 for a good depiction of the operating environment.

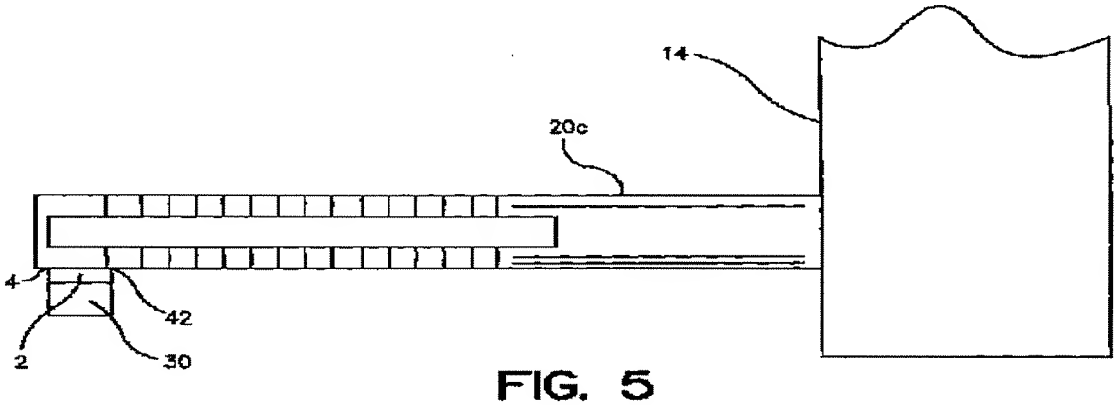


FIG. 5

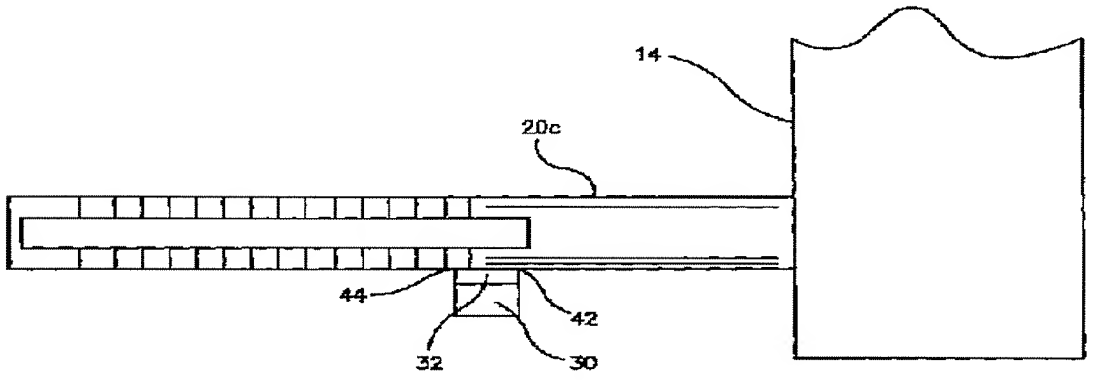


FIG. 6

Kindly refer to the first two full paragraphs on page 15 of the specification, which correspond to paragraphs [0069] - [0070] of the published application 20020022068.

> [0069] When the bottom shoe assembly 30 and bottom wear pad 32 are located at the distant end of the tie bar member 20a at the maximum day light position, the leading edge 42 of the bottom wear pad 32 is subjected to higher stress than the trailing edge 44 due to the bending of the tie bar member 20c. In this configuration, the distant end of the tie bar member 20c tends to deflect away from the trailing edge 44 of the bottom wear pad 32 concentrating the force on a smaller area near the leading edge 44 of the bottom wear pad 32.
>
> [0070] When the bottom shoe assembly 30 and bottom wear pad 32 are located intermediate the two ends of the tie bar member 20c at the minimum shut height position, the trailing edge 44 of the bottom wear pad 32 is subjected to higher stress than the leading edge 44 due to a different bending profile of the tie bar member 20c. In this configuration, the distant end of the tie bar member 20c tends to deflect downward concentrating the force on a smaller area near the trailing edge 42 of the bottom wear pad 32.

The present invention overcomes this problem by providing a shoe assembly which dynamically adjusts to the tie bar over the entire moving range, keeping the entire surface of the wear pad (not just the leading and trailing edges) in contact with the bottom surface of the tie bar. With reference to the embodiment of Fig. 7 (reproduced below) a central web 52 acts to redirect the downward-acting forces from the leading and trailing edges 62,64 to a central area inside the body.

The following concise explanation of the subject matter defined in each of the independent Claims 1, 34, and 35 will be aided by reference to the Fig. 7 embodiment.

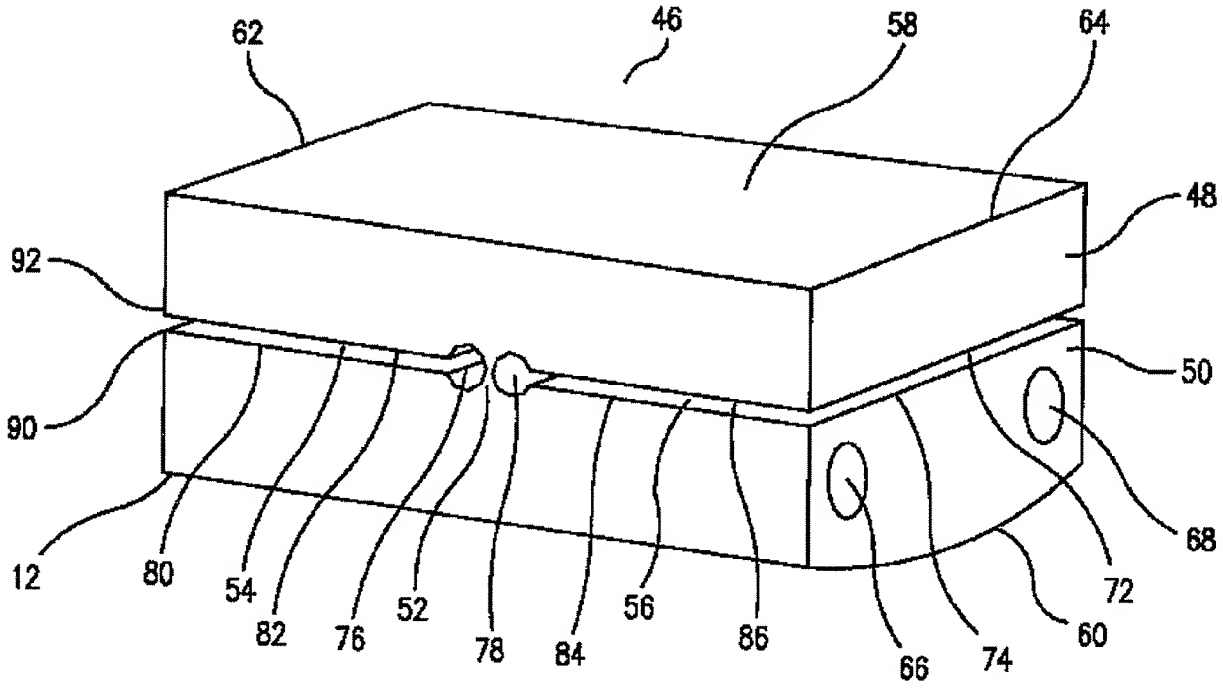


FIG. 7

Independent Claim 1 recites a novel combination of structure and/or function for a molding system flexible shoe assembly. A body (12 in the Fig. 7 embodiment; see para [0072], page 16, lines 2-4) supports a load, and a force redirector (52 in the Fig. 7 embodiment; see para [0080], page 18, lines 1-4) redirects the force of the load.

The body (12 in the Fig. 7 embodiment) has (i) an upper wearing surface (upper surface 58 contains an integral wearing surface in the Fig. 7 embodiment; see para [0072], page 16, lines 4-7) configured to slideably engage a linearly moving complimentary surface (tie bar slot 24d in the Fig. 4 embodiment; see para [0066], page 14, lines 16-18) of a supported member (tie bar 20c in the Fig. 4 embodiment; see para [0066], page 14, lines 16-18). The body also has (ii) a lower mounting surface (60 in the Fig. 7 embodiment; see para [0086], page 19, lines 18-

19) that is configured to engage a complementary surface (134 if the Fig. 15 embodiment; see para [0100], page 23, line 30 - page 24, line 3) within the molding system, and to provide positioning and adjustment of the shoe assembly during installation (see para [0101], page 24, lines 15-20.

The force redirector (52 in the Fig. 7 embodiment) is disposed in the body (12 in the Fig. 7 embodiment) in a plane below the upper wearing surface (integral with surface 58 in the Fig. 7 embodiment), and is configured to redirect the force from a leading edge and a trailing edge (edges 62 and 64 in the Fig. 7 embodiment; see para [0080], page 18 lines 1-4) of the upper wearing surface to a central area in the body (see para [0080], page 18 lines 1-4).

The force redirector is disposed substantially perpendicular to the linear movement of the body (the central web 52 in the Fig 7 embodiment is disposed perpendicular to the direction of linear movement between edges 62 and 64).

Independent Claim 34 recites a novel combination of structure and/or function for a molding system flexible shoe assembly having a body (12 in the Fig. 7 embodiment; see para [0072], page 16, lines 2-4) for supporting a load, and a force redirector (52 in the Fig. 7 embodiment; see para [0080], page 18, lines 1-4).

The body (12 in the Fig. 7 embodiment) has an upper wearing surface (upper surface 58 contains an integral wearing surface in the Fig. 7 embodiment; see para [0072], page 16, lines 4-7) that is configured to slideably engage a complimentary surface (tie bar slot 24d in the Fig. 4 embodiment; see para [0066], page 14, lines 16-18) of a supported member (tie bar 20c in the Fig. 4 embodiment; see para [0066], page 14, lines 16-18) that moves in a linear relationship with the body (tie bar 20c moves linearly with respect to body 12).

The force redirector (52 in the Fig. 7 embodiment; see para [0080], page 18, lines 1-4) comprises a pair of slots (54 and 56 in the Fig. 7 embodiment; see para [0073], page 16, lines 9-12) in the body (12 in the Fig. 7 embodiment) forming a web (52 in the Fig. 7 embodiment; see para [0073], page 16, lines 9-12) having an integral bearing surface thereon (104 in the Fig. 9 embodiment; see para [0091], page 24, lines 21, lines 4-10).

The force redirector (52 in the Fig. 7 embodiment; see para [0080], page 18, lines 1-4) is disposed in the body (12 in the Fig. 7 embodiment) in a plane below the upper wearing surface (integral with surface 58 in the Fig. 7 embodiment), and is configured to redirect a linearly-moving force from a leading edge and a trailing edge (edges 62 and 64 in the Fig. 7 embodiment; see para [0080], page 18 lines 1-4) of the upper wearing surface to a central area in the linearly moving body (see para [0080], page 18 lines 1-4).

Independent Claim 35 recites a novel combination of structure and/or function for a molding system flexible shoe assembly having a body (12 in the Fig. 7 embodiment; see para [0072], page 16, lines 2-4) for supporting a load, and a force redirector (52 in the Fig. 7 embodiment; see para [0080], page 18, lines 1-4).

The body (12 in the Fig. 7 embodiment) has an upper wearing surface (upper surface 58 contains an integral wearing surface in the Fig. 7 embodiment; see para [0072], page 16, lines 4-7) that is configured to slideably engage a linearly moving complimentary surface (tie bar slot 24d in the Fig. 4 embodiment; see para [0066], page 14, lines 16-18) of a supported member (tie bar 20c in the Fig. 4 embodiment; see para [0066], page 14, lines 16-18).

The force redirector (52 in the Fig. 7 embodiment) is disposed in the body in a plane below the upper wearing surface and substantially perpendicular to the linear movement of

the body.

The force redirector (52 in the Fig. 7 embodiment) is configured to redirect a linearly-moving force from a leading edge and a trailing edge (edges 62 and 64 in the Fig. 7 embodiment; see para [0080], page 18 lines 1-4) of the upper wearing surface to a central area in the body (see para [0080], page 18 lines 1-4).

The body (12 in the Fig. 7 embodiment) includes at least one fixation bore (66 and/or 68 in the Fig. 7 embodiment; see para [0086], page 19, lines 20-22) extending lengthwise through a lower support (50 in the Fig. 7 embodiment; see para [0086], page 19, lines 20-22) of the body.

37 CFR 41.37(c)(1)(vi) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. The rejection of Claims 1, 7, 27, 28, 30, 31, and 35 under 35 U.S.C. §102(b) as being anticipated by Faint (USP 4,759,452); and

2. The rejection of Claims 1, 7-11, and 27-34, and 35 under 35 U.S.C. §103(a) as being unpatentable over Schlereth (USP 5,176,454) in view of Osawa (USP 4,941,758).

37 CFR 41.37(c)(1)(vii) ARGUMENT

Briefly, the Examiner has not made out a prima facie case of either anticipation or obviousness because none of the cited references discloses or suggests the recited combinations.

1. Claims 1, 7, 27, 28, 30, 31, and 35 are not anticipated by Faint.

1A. Claims 1, 7, 27, 28, 30, and 31.

Initially, there is great confusion in the February 2, 2006 final Office Action, which may lead to confusion on the Examiner's part, and an inability of Applicants to fully respond. Specifically, in paragraph number 2 of the Office Action, the Examiner states that the following structure of Faint corresponds to Applicants' claimed structure as follows:

Applicants' Claimed Structure	Faint
body (12 in the Fig. 7 embodiment)	pad 52
[the body] lower mounting surface (60 in the Fig. 7 embodiment)	pad 52's cylindrical lower mounting surface
... that engages a complementary surface within said molding system... ("the surface of a bore in a platen" in the Fig. 7 embodiment)	support block 54
a force redirector (52 in the Fig. 7 embodiment)	pad 52's cylindrical lower mounting surface

Yet, in paragraph number 5 of the Office Action, the Examiner identifies different structure of Faint as corresponding to Applicants' claimed structure as follows:

Applicants' Claimed Structure	Faint
body (12 in the Fig. 7 embodiment)	combination of pad 52 and support block 54

[the body] lower mounting surface (60 in the Fig. 7 embodiment)	lower mounting surface formed on the lower member
... that engages a complementary surface within said molding system... ("the surface of a bore in a platen" in the Fig. 7 embodiment)	not identified
a force redirector (52 in the Fig. 7 embodiment)	a cylindrical force redirector surface formed at a connection surface between the upper and lower members

Which interpretation is the basis for this rejection?

Under either interpretation, Claims 7, 27, 28, 30, and 31 are not anticipated by Faint. Faint lacks at least the following features.

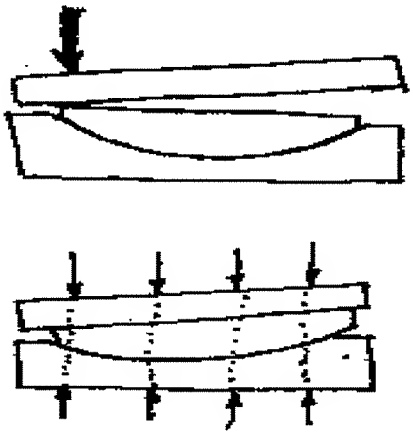
(i) In the first interpretation above, pad 52's cylindrical lower surface can not be both the lower mounting surface and the force redirector (which are different claimed structures).

(ii) Under either interpretation, the Examiner has identified no structure on the lower mounting surface which performs the claimed function of "providing positioning and adjustment of said shoe assembly during installation." In the claimed structure (Claim 1 recites that the lower mounting surface is ***configured***), it is the ***configuration*** of the lower mounting surface (e.g., the semi-cylindrical shape of the bottom surface 60 in the Fig. 7 embodiment) which performs the function of "providing positioning and adjustment of said shoe assembly during installation." The Examiner has identified no corresponding configuration of structure in Faint which performs this claimed function.

(iii) Likewise, under either interpretation, the Examiner has failed to identify any redirector which is disposed in the claimed "plane below said upper wearing surface." A plane is defined as "***a flat or level surface***" in Dictionary.com. *Dictionary.com Unabridged (v 1.0.1)*,

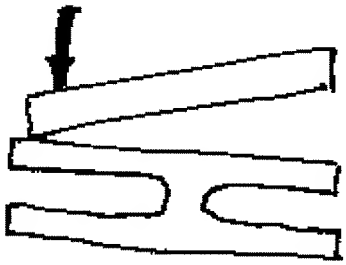
Based on the Random House Unabridged Dictionary, © Random House, Inc. 2006. http://dictionary.reference.com/browse/plane. The specification and drawings of the subject application are in accord. All embodiments of the subject application depict and describe a force director which is disposed in the body in a flat or level plane below the upper wear surface.

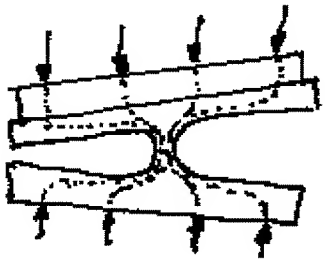
(iv) Lastly, under either interpretation, the Examiner has failed to identify any redirector which is "configured to ***redirect*** said force from a leading edge and a trailing edge of said upper wearing surface to a central area in said body." Faint is a self-aligning bearing that does not redirect any force therethrough. In Faint, a downward force vector applied to either the leading edge or the trailing edge of the upper member 52 causes relative rotation of the upper member 52 within lower member 54, but does not ***move*** the downward force vector – the downward force vector is still applied through the leading or trailing edge of upper member 52 directly down through the lower member 54. In the below sketch, when a misaligned load is applied at one end of the Faint upper member, that load vector still is applied to the edge and is not ***redirected*** to the central area in the body.



In contrast, in the present invention, a downward force vector applied to the leading or trailing edge of the upper support member is actually moved (i.e., redirected) to the

central area ***inside*** the body. With reference to the Fig. 7 embodiment, for example, when a downward force vector is applied to edge 62 of upper support 48, that downward force vector is moved or redirected through the web 52 (which is "in the body") to the lower body 12. The force is thus moved or redirected from the edge. In the below sketch, when a misaligned load is applied at one end of the upper member according to the present invention, the force is redistributed equally with a directional change in the forces. Specifically, the forces are redirected, focused, and concentrated to pass through the web ("to a central area in said body") .





1B. Claim 35.

With respect to Claim 35, Faint lacks at least the following features.

(i) Under either of the Examiner's interpretations, he has failed to identify any redirector which is disposed in the claimed "plane below said upper wearing surface." See the reasoning in 1A(iii) above.

(ii) Likewise, under either interpretation, the Examiner has failed to identify any redirector which is "configured to redirect a linearly-moving force from a leading edge and a trailing edge of said upper wearing surface to a central area in said body." See the reasoning in 1A(iv) above.

(iii) The Examiner has not even addressed the claim limitation, "said body including at least one fixation bore extending lengthwise through a lower support of said body." Such a feature is lacking in Faint.

Accordingly, the Examiner has failed to identify structures and/or functions in Faint which correspond to the features of Claims 1, 7, 27, 28, 30, 31, and 35 noted above. Thus, Faint is insufficient to support the anticipation rejection under 35 U.S.C. §102. Federal Circuit decisions repeatedly emphasize that anticipation is established only if (1) all of the elements of an invention, as stated in a patent claim, (2) are **identically** set forth 3) in a single prior art reference. See, e.g., *Transclean Corp. v. Bridgewood Services, Inc.*, 290 F.3d 1364 (Fed. Cir. 2002); *EMI Group North America, Inc. v. Cypress Semiconductor Corp.*, 268 F.3d 1342 (Fed. Cir. 2001); *Rapoport v. Dement*, 254 F.3d 1053 (Fed. Cir. 2001); and *Gechter v. Davidson*, 116 F.3d 1454, 1457 (Fed. Cir. 1997) (holding that "under 35 U.S.C. §102, every limitation of a claim must identically appear in a single prior art reference for it to anticipate the claim"). Emphasizing "the rigors of anticipation", the Federal Circuit, in *Motorola, Inc. v. Interdigital Technology Corp.*, 121 F.3d 1461 (Fed. Cir. 1997), held that a jury's verdict that one patent claim was anticipated by a prior art reference could not stand because the reference lacked a limitation the claim required. Conclusory statements based on the state of the art can not "supplant the requirement of an anticipatory disclosure in the prior art reference itself." *Id.* at 1473. In the present case, not only

does Faint fail to disclose or suggest the noted claim features, but the Examiner has failed to make out a prima facie case of anticipation by failing to address certain claim limitations, and failing to set forth a cogent anticipation rejection on the record.

Accordingly, Claims 1, 7, 27, 28, 30, 31, and 35 are not anticipated by Faint.

2. Claims 1, 7-11, and 27-34, and 35 are not obvious over Schlereth in view of Osawa.

Superficially, Schlereth presents a load-shifting web structure similar to the present invention, but close examination reveals that it too lacks sufficient disclosure to render the above-noted claims unpatentable. Note that in order to read the subject claims on Schlereth, the Examiner inverts the Schlereth structure. Even this expedient can not salvage this rejection. Schlereth fails to disclose or suggest at least the following.

2A. Claims 1, 7-11, and 27-33.

(i) The Examiner has failed to identify any body which has a "lower mounting surface configured to engage a complementary surface within said molding system and providing positioning and adjustment of said shoe assembly during installation." In paragraph number 4 of the Office Action, the Examiner makes the unsubstantiated statement that the (inverted) support surface 20 of Schlereth is "configured to engage a supporting member and providing adjustment of said shoe assembly during installation." The Examiner identifies no structure on the body 16 which is "configured to engage" any supporting member; he identifies no structure which corresponds to the "supporting member"; and he identifies no structure which is ***configured*** to perform the claimed function "providing adjustment of said shoe assembly during installation." In the subject application, the embodiment of Fig. 7

shows that the body 12 has a lower mounting surface 60 which is configured in a semi-cylindrical shape so as to engage a correspondingly-shaped complementary surface within the molding system (see 134 in the Fig. 15 embodiment). Clearly, the complementary semi-cylindrical shapes aid in adjustment and registration of the shoe assembly during installation. The flat surface 20 of the body 16 of Schlereth, on the other hand, will not provide any "adjustment of said shoe assembly during installation." Flat surfaces can not be registered with complementary flat surfaces. That is why Schlereth must use threaded bores 22 to clamp on a further structural element. Thus, the flat surface of Schlereth is not configured to provide adjustment during installation. Accordingly, Schlereth lacks the claimed "lower mounting surface configured to engage a complementary surface within said molding system and providing positioning and adjustment of said shoe assembly during installation."

(ii) Likewise, the Examiner has failed to identify any body which has an "***upper wearing surface*** configured to slideably engage a linearly moving complimentary surface of a supported member." In paragraph number 4 of the Office Action, the Examiner states that the "body" of Schlereth is the bearing block 16, and he admits that it has no "wearing surface." Instead, the Examiner states that Schlereth "teaches a plurality of balls for reducing friction between the relatively moving components." See Fig. 5 of Schlereth for a depiction of the balls 211x and 211y, together with the corresponding description at Col. 5, lines 23-34. In paragraph number 5 of the Office Action, the Examiner opines that the body of Schlereth includes not just the body 16, but also includes the "fixed element" to which the body 16 is "bolted." (The Examiner evidently believes that the "fixed element" is the guide carriage structure 212 in Fig. 5 of Schlereth.) However, if the "plurality of balls" in

Schlereth is indeed the "wearing surface", then Schlereth has no force redirector which "redirects said force from a leading edge and a trailing edge of said upper wearing surface to a central area in said body." That is, the balls 211x and 211y of Schlereth are disposed inside the guide carriage 212, and thus inside the "body." Thusly-disposed, there is no force that is applied to a leading edge or a trailing edge of an upper wearing surface which the force redirector shifts to a central area thereof. Therefore, with the claims read onto the structure of Schlereth as proposed by the Examiner, there is no "upper wearing surface" from which the leading and trailing edge forces can be redirected.

(iii) As the complement to the above point, if the balls 211x and 211y of Schlereth are indeed the upper wearing surface, then there is no force redirector in Schlereth which redirects "said force from a leading edge and a trailing edge of said upper wearing surface to a central area in said body."

The Examiner's reliance on Osawa will not save the rejection. Even if the linear bearing structure of Osawa is inserted into the guide carriage 212 of Schlereth at the location of balls 211x and 211y, the Schlereth structure will still lack either an upper wearing surface or a force redirector, for the reasons noted above.

2B. Claim 34.

With respect to Claim 34, Schlereth and Osawa lack at least the following features.

(i) the Examiner has failed to identify any body which has an "upper wearing surface configured to slideably engage a linearly moving complimentary surface of a supported member." See the reasoning in 2A(ii) above.

(ii) As the complement to the above point, if the balls 211x and 211y of Schlereth are indeed the upper wearing surface, then there is no force redirector in Schlereth which redirects "said force from a leading edge and a trailing edge of said upper wearing surface to a central area in said body." See the reasoning in 2A(iii) above.

2C. Claim 35.

With respect to Claim 35, Schlereth and Osawa lack at least the following features.

(i) The Examiner has failed to identify any body which has an "upper wearing surface configured to slideably engage a linearly moving complimentary surface of a supported member." See the reasoning in 2A(ii) above.

(ii) As the complement to the above point, if the balls 211x and 211y of Schlereth are indeed the upper wearing surface, then there is no force redirector in Schlereth which redirects "a linearly-moving force from a leading edge and a trailing edge of said upper wearing surface to a central area in said body." See the reasoning in 2A(iii) above.

(iii) With respect to Claim 35, the Examiner has failed to identify any "fixation bore extending lengthwise through a lower support of said body." With respect to similar Claim 27, however, the Examiner has identified the hole 22 of Schlereth as the corresponding structure. This is clearly inapposite. The holes 22 of Schlereth are described and depicted as threaded bores for affixing a structural element to the surface 20, see Col. 4, lines 50-54. These bores do not extend ***lengthwise*** through the body. In fact, given the Examiner's interpretation that the body includes the block 16 and the guide carriage 212, the bores of Schlereth do not extend ***through*** such a body.

Accordingly, the Examiner has failed to identify structures and/or functions in Schlereth and Osawa which correspond to the features of Claims 1, 7-11, and 27-34, and 35 noted above. Thus, Schlereth and Osawa are insufficient to support the obviousness rejection under 35 U.S.C. §103.

Moreover, Applicants also submit that the person of ordinary skill in this art, at the time of the invention, would have no motivation or suggestion to combine Schlereth with Osawa, and the Examiner has provided no compelling reasoning on the record to the contrary.

In the final Office Action, the Examiner states that

> ...it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the linear bearing of Schlereth with a linear bearing having a wear surface, as taught by Osawa, [the] motivation being to reduce the number of components of the device thereby reducing the cost and assembly time of the device.

However, in Schlereth, the load is transmitted through rows of balls 211x and 211y. Contrary to the Examiner's assertion, the person of ordinary skill in the art at the time would not replace the more efficient ball bearings with a less efficient wear plate. Such a replacement would require much more power to move the equipment, due to increased friction. This is contrary to the use of the wheels and the ball bearings discussed throughout the Schlereth disclosure. Likewise, nothing in Osawa suggests that more efficient ball bearings should be replaced with a less efficient wear plate. Thus, the person of ordinary skill in the art, at the time of the invention, would not be motivated to place a wear plate in the Schlereth structure.

Moreover, the suggestion to combine references must be more specific. The law is clear that the Examiner must make "findings as to the ***specific*** understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of [the] invention ***to make the combination in the manner claimed***." (emphasis added) *In re Kotzab*, 217 F. 3d 1365, 1371 (Fed. Cir. 2000). Since the stated motivation-to-combine (reduce parts) is woefully inadequate as a ***specific*** understanding that would have motivated one with no knowledge of the subject invention ***to make the combination in the manner claimed***, a prima facie case of obviousness has not been made out, and this rejection must be withdrawn.

In more detail, the stated suggestion to combine references, "to reduce the number of components of the device thereby reducing the cost and assembly time of the device" is legally insufficient. There is nothing in any reference to suggest that Schlereth's solution to load bearing is lacking, or that a different structure should be adapted. The stated suggestion "to reduce costs" would permit any reference to be combined with any other reference in a "pick-and-choose" hindsight approach that the courts have found legally improper. *See Ex parte Levengood*, 28 USPQ2d 1300, 1302 (Patent Office Board of Appeals 1993), and *In re Gorman*, 933 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). The Examiner is merely picking and choosing among references using Applicants' teachings as a map. Hindsight combination of references is not a valid basis for rejection under 35 U.S.C. §103, *see In re Adams*, 148 USPQ 742 (CCPA 1966) and *In re Skoll*, 187 USPQ 481, 484 (CCPA 1975). Further, in *Twin Disc Inc. v. United States*, 10 Cl. Ct. 713; 231 USPQ 417, 425 (Cl. Ct. 1986), the Court stated:

> ... it is now clear beyond cavil that it is not permissible to ascertain factually what the inventors did and then view the prior art in such a manner as to select from the random facts of that art only those which may be modified and then utilized to reconstruct the claimed invention.

Citing *Orthopedic Equipment Co., Inc. v. United States*, 702 F.2d 1005, 1012; 217 USPQ 193, 199 (Fed. Cir. 1983), the Court in *Twin Disc* further stated that it is incorrect to use the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit. This is precisely what the Examiner has done in this case - used Applicants' claims as a template to piece together various parts of the claimed invention. If this standard of examination is approved, very few patents will ever issue, since all patent claims are combinations of known features. Therefore, Applicant respectfully traverses the combination of references in the manner proposed.

For all of the reasons noted above, Claims 1, 7-11, and 27-34, and 35 are fully patentable over Schlereth in view of Osawa.

CONCLUSION

In view of the above, Appellants submit that of Claims 1, 7, 27, 28, 30, 31, and 35 are not anticipated by Faint, and that Claims 1, 7-11, and 27-34, and 35 are not obvious over Schlereth in view of Osawa. Accordingly, reversal of the final rejections, allowance of the rejected claims, and issuance of the subject patent application are respectfully requested.

Appellant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 625-3507. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

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37 CFR 41.37(c)(1)(viii) CLAIMS APPENDIX

1. A molding system flexible shoe assembly, comprising:

a body for supporting a load; and

a force redirector;

said body having (i) an upper wearing surface configured to slideably engage a linearly moving complimentary surface of a supported member, and (ii) a lower mounting surface configured to engage a complementary surface within said molding system and providing positioning and adjustment of said shoe assembly during installation,

said force redirector being disposed in said body in a plane below said upper wearing surface and configured to redirect said force from a leading edge and a trailing edge of said upper wearing surface to a central area in said body,

said force redirector being disposed substantially perpendicular to the linear movement of said body.

2. (Withdrawn) A shoe as in claim 1 further comprising,

a load distributor disposed in a place above said force redirector, said load distributor distributing a load across said upper surface and maintaining said upper surface relatively flat under loading.

3. (Withdrawn) A shoe as in claim 2 wherein, said load distributor is formed on said upper surface.

4. (Withdrawn) A shoe as in claim 2 further comprising,

a wear pad; and

a wear pad retainer formed in said upper surface;

said wear pad mounted by said wear pad retainer on said upper surface wherein said load distributor is formed on a lower surface of said wear pad.

5. (Withdrawn) A shoe as in claim 3, wherein said load distributor is a series of stepped notches.

6. (Withdrawn) A shoe as in claim 3, wherein said load distributor is a contoured recess.

7. A shoe as in claim 1, wherein said force redirector provides pivotal movement of said upper surface.

8. A shoe as in claim 7 wherein, said force redirector comprises a pair of slots in said body forming a web interconnecting an upper support member and a lower support member.

9. A shoe as in claim 7 wherein, said force redirector comprises a slot forming a web interconnecting an upper support member and a lower support member.

10. A shoe as in claim 8 further comprising:

a first flexation stop disposed in one of said pair of slots between said upper support member and said lower support member; and

a second flexation stop disposed in a second of said pair of slots between said upper support member and said lower support member, said first flexation stop and said second flexation stop limiting pivotal movement of said upper support.

11. A shoe as in claim 9 further comprising a flexation stop disposed in said slot between said upper support member and said lower support member, said flexation stop limiting pivotal movement of said upper support.

12. (Withdrawn) A shoe as in claim 1, wherein said wear pad retainer comprises (i) a first edge lip formed at a first peripheral edge of said upper surface of said body, and (ii) a second edge lip formed at a second peripheral edge of said upper surface of said body, said first edge lip and said second edge lip engaging respective ends of said wear pad and releasably retaining said wear pad with said shoe.

Claims 13-26 (Cancelled)

27. A flexible shoe assembly as in claim 1 wherein said body includes at least one fixation bore extending lengthwise through a lower support of said body.

28. A flexible shoe assembly as in claim 1 wherein said complementary surface of said lower mounting is configured to engage a surface of a bore in a platen within said molding system.

29. A flexible shoe assembly as in claim 28 wherein said bottom surface is semi cylindrical.

30. A shoe as in claim 28, wherein said force redirector provides pivotal movement of said upper surface.

31. A flexible shoe assembly as in claim 28 wherein said body includes at least one fixation bore extending lengthwise through a lower support of said body.

32. A shoe as in claim 29, wherein said force redirector provides pivotal movement of said upper surface.

33. A flexible shoe assembly as in claim 29, wherein said body includes at least one fixation bore extending lengthwise through a lower support of said body.

34. A molding system flexible shoe assembly, comprising:

a body for supporting a load; and

a force redirector;

said body having an upper wearing surface configured to slideably engage a complimentary surface of a supported member moving in a linear relationship with said body,

said force redirector comprising a pair of slots in said body forming a web having an integral bearing surface thereon,

said force redirector being disposed in said body in a plane below said upper wearing surface and configured to redirect a linearly-moving force from a leading edge and a trailing edge of said upper wearing surface to a central area in said linearly moving body.

35. A molding system flexible shoe assembly, comprising:

a body for supporting a load; and

a force redirector;

said body having an upper wearing surface configured to slideably engage a linearly moving complimentary surface of a supported member,

said force redirector being disposed in said body in a plane below said upper wearing surface and substantially perpendicular to the linear movement of said body,

said force redirector configured to redirect a linearly-moving force from a leading edge and a trailing edge of said upper wearing surface to a central area in said body,

said body including at least one fixation bore extending lengthwise through a lower support of said body.

37 CFR 41.37(c)(1)(ix) EVIDENCE APPENDIX

None.

37 CFR 41.37(c)(1)(x) RELATED PROCEEDINGS APPENDIX

None.